Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~4 or 4n (n indicates an integer, 4 forms one group)~~ four pieces of a first piece, a second piece, a third piece and a fourth piece in an axial direction, and an axial length and an electrical angle of said each piece, assuming an axial length of said ~~one group~~ four pieces of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a X-axis , an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

~~an axial~~ a length of said ~~each piece of said one group of said four pieces, as said equivalent axial length, is respectively set to any axial length within a range from 0.19L to 0.39L, 0.81L to 0.61L, 0.814L to 0.61L or~~ first piece in said axial direction is from 0.19L to 0.39, a length of said second piece in said axial direction is from 0.81L to 0.61L, a length of said third piece in said axial direction is from 0.81L to 0.61L, and a length of said fourth piece in said axial direction is from 0.19L to 0.39L, and effective pole opening angles are arranged in a circumferential direction as phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

3. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~4 or 4n (n indicates an integer, 4 forms one group)~~ four pieces of a first piece, a second piece, a third piece and a fourth piece in an axial direction, and an axial length and an electrical angle of said each piece, assuming an axial length ~~of said one group~~ of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial

direction as a X-axis, an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

~~an axial length of said each piece of said one group of said four pieces~~ each length of said first piece, said second piece, said third piece and said fourth piece in said axial direction, as said equivalent axial length, is set on the basis of 1:2:2:1 ratio, within a range of ±5% of a total axial length ~~of said one group~~ of said four pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

4. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~6 or 6n (n indicates an integer, 6 forms one group)~~ six pieces of a first piece, a second piece, a third piece, a fourth piece, a fifth piece and a sixth piece in an axial direction, and an axial length and an electrical angle of said each piece, assuming an axial length ~~of said one group~~

of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a X-axis , an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial ~~axial~~ length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

an axial length of said each piece ~~of said one group~~ of said six pieces, as said equivalent length, on the basis of 0.25L, 0.50L, 0.25L, 0.25L, 0.50L, and 0.25L, is respectively set within a range of ±5% of a total axial length ~~of said one group~~ of said six pieces,

or within a range of lengths in said axial direction of said first piece set on from 0.25L to 1/3L, said second piece set on from 0.50L to 1/3L, said third piece set on from 0.25L to 1/3L, set fourth piece set on from 0.25L to 1/3L, said fifth piece set on from 0.50 to 1/3L ~~or~~ and said sixth piece set on from 0.25 to 1/3L, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, π, 0, and π.

5. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~6 or 6n (n indicates an integer, 6 forms one group)~~ six pieces of a first piece, a second piece, a third piece, a fourth piece, a fifth piece and a sixth piece in an axial direction, and a longitudinal length and an electrical angle of said each piece, assuming an axial length ~~of said one group~~ of said rotor core or said stator core as 2L, with L being an axial length dimension, said axial direction as a X-axis, an axial center as x=0, and electromagnetic exciting force in a radial direction as F(x), on the basis of following three relational formulas:

$$\int_{-L}^{L} F(x)dx = 0$$

$$\int_{-L}^{L} xF(x)dx = 0$$

$$F(-x) = -F(x)$$

are set according to a relationship between an equivalent axial length and an equivalent position shifted between said pieces in a circumferential direction and are arranged in a setting order, and

an axial length of ~~said each piece of said one group of~~ said six pieces, as said equivalent length, of said first piece set on ~~the basis of~~ 0.25L, said second piece set on 0.50L, said third piece set on 0.25L, said fourth piece set on 0.25L, said fifth piece set on 0.50L, and said sixth piece set on 0.25L, is set ~~to any axial~~

~~length~~ within a range of ±5% of a total axial length of said one group of said six pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, π, 0, and π.

6. (Canceled)

7. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~4 or 4n (n indicates an integer, 4 forms one group)~~ four pieces of a first piece, a second piece, a third piece and a fourth piece in an axial direction, and electromagnetic exciting force in a radial direction having a practically same amplitude is applied to said each piece, and

~~when~~ assuming an axial length of said one group of said rotor or said stator ~~is set~~ as 2L with L being an axial length dimension, said each piece ~~of said one group~~ of said four pieces, as an equivalent axial length, is respectively set within a range from 0.19L to 0.39L relating to said first piece, 0.81L to 0.61L relating to said second piece, 0.81L to 0.61L relating to said third piece and from or 0.19 to 0.39L relating to said fourth piece, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

8. (Currently Amended) An electric motor composed of a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~4 or 4n (n indicates an integer, 4 forms one group)~~ four pieces of a first piece, a second piece, a third piece and a fourth piece in an axial direction, and electromagnetic exciting force having a practically same amplitude in a radial direction is applied to said each piece, and

an axial length of said each piece ~~of said one group~~ of said four pieces, as an equivalent axial length, on the basis of 1:2:2:1 ratio, is set to any axial length within a range of ±5% of a total axial length of said one group of said four pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, and π.

9. (Currently Amended) An electric motor comprising a rotor equipped with magnets and a stator having a plurality of slots, wherein:

said rotor or said stator is divided into ~~6 or 6n (n indicates an integer, 6 forms one group)~~ six pieces of a first piece, a second piece, a third piece, a fourth piece, a fifth piece and a sixth piece in an axial direction, and electromagnetic exciting force in a radial direction having a practically same amplitude is applied to said each piece, and

~~when~~ assuming an axial length of said one group of said rotor or said stator ~~is set~~ as $2L_1$ ~~with L being~~ an axial length ~~dimension an axial length~~ of, said each piece ~~of said one group~~ of said six pieces, as said equivalent axial length~~, on the basis~~ of said first piece set on 0.25L, of said second piece set on

0.50L, of said third piece set on 0.25L, of said fourth piece set on 0.25L, of said fifth piece set on 0.50L, and of said sixth piece set on 0.25L, is set ~~to any axial length~~ within a range of ±5% of a total axial length of said one group of said six pieces, and effective pole opening angles are arranged in the circumferential direction as a phase difference of electrical angles of said neighboring pieces equivalent to 0, π, 0, π, 0, and π.

10. (Previously Presented) An electric motor according Claim 2 wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

11. (Previously Presented) An electric motor according Claim 2, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.

12. (Canceled)

13. (Presently Presented) An electric motor according to Claim 3, wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

14. (Presently Presented) An electric motor according to Claim 4, wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

15. (Presently Presented) An electric motor according to Claim 5, wherein said effective pole opening angles of said each piece are set to an angle shifted by one half of said slot between said pieces.

16.-17. (Canceled)

18. (Presently Presented) An electric motor according to Claim 3, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.

19. (Presently Presented) An electric motor according to Claim 4, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.

20. (Presently Presented) An electric motor according to Claim 5, wherein when said electric motor is a linear motor, said rotor and said stator are in a shape developed on a plane.